U. S. Steel
Clairton Works
400 State Street
Clairton, PA 15025-1855

March 27, 1995

Mr. Michael Ioff
U. S. Environmental Protection Agency
Region III
Air, Radiation and Toxics Division
841 Chestnut Building
Philadelphia, PA 19107

Roger Westman
Allegheny County Health Department
Department of Air Quality
301 Thirty-ninth Street
Pittsburgh, PA 15201

SUBJECT: Technical Report
U. S. Steel Clairton Works
Coke Oven Gas Venting

Dear Mr. Ioff:

In a conference call on January 26, 1995 U. S. Steel agreed to submit the results of a consultant's investigation of the Clairton coke battery igniter pilot system. Completion of the report has been delayed because a key engineer at ChemTech (the system designer) was unavailable and the scope of ChemTech's work has been increased. ChemTech's work is now underway and their final report is now expected by mid-May.

In the interim, two significant changes have been made to improve pilot reliability:

1. A new coke oven gas line, consisting of approximately 900 lineal feet of stainless steel pipe has been installed to provide a more reliable, clean, and dry gas supply to the Second Unit Flares. This system was placed in operation during the week of March 20.

2. Air flow has been readjusted to improve flame stability.

Also, installation of test ports on two selected flares to obtain field data for ChemTech evaluation is underway.

ChemTech will be working as part of a team consisting of Operations (Clairton Coking and Chemicals), Engineering and ChemTech Consultants, Inc. which will evaluate the flare pilot operation and recommend improvements for reliability.

ChemTech's current tasks are:

1. Develop calculated curves showing optimum and range of operability of the pilots relating to gas pressure, gas flow, air flow, % fuel in air and total O_2 available for combustion.

2. Analyze the system gas flow with and without gas flow orifice and comparison to the vendor data.

3. Collect field data on pressures and O_2 concentrations downstream of the pilot venturi.

4. Investigate air filter options and air flow throttling devices.

5. Calculate and test rangeability of natural gas as a back-up pilot fuel.

6. Investigate use of a parallel power tie-in source for pilot lighting.

7. Verify field piping systems for use in system analysis and training.

We now expect that the ChemTech report will be available for distribution by May 19.

If you have any questions, please call me at (412) 233-1101.

Sincerely,

H. R. McCollum
Manager Environmental Control Department

cc: Steve Todd
HRM/kb-95078